

Global Ethanol Opportunities

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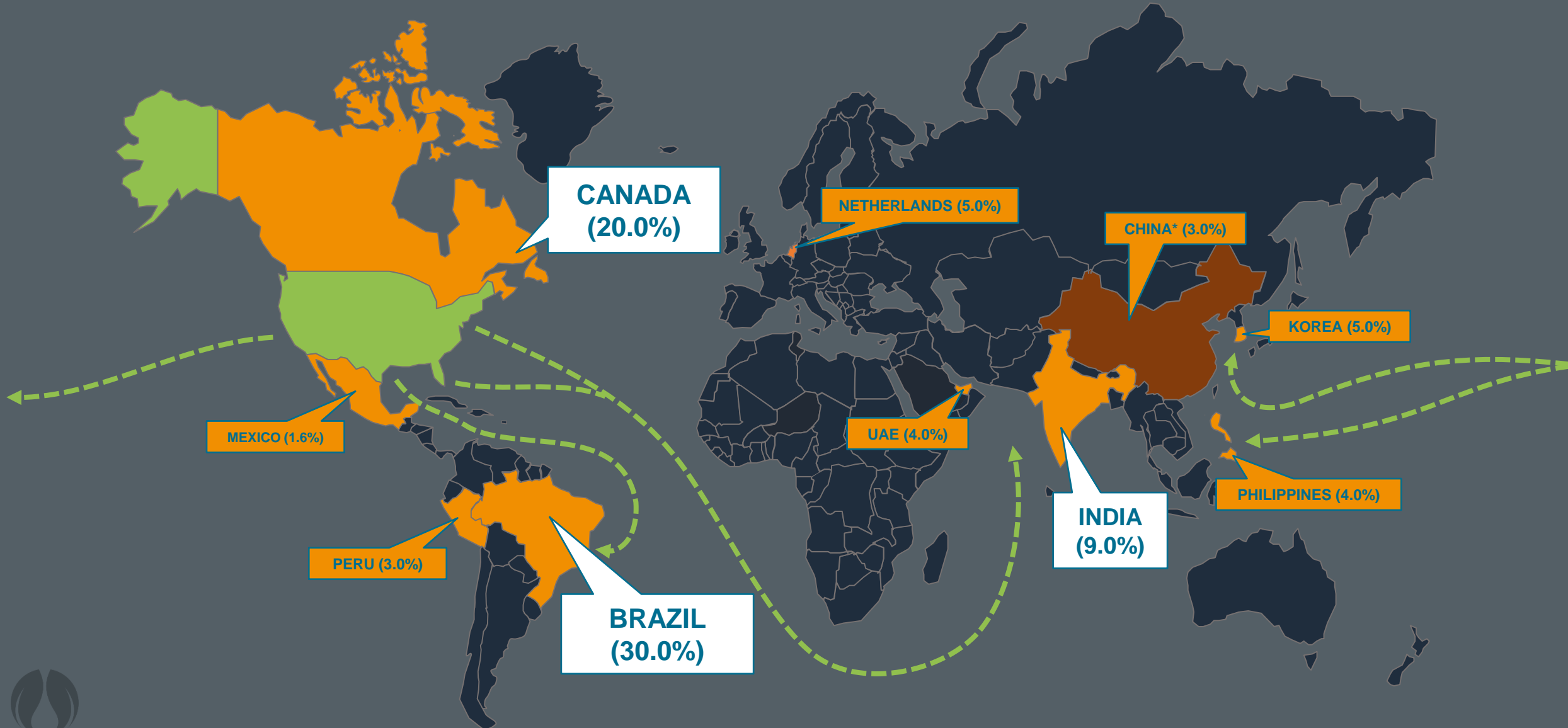
What is the E10 blend target worth globally?

Current global blend rate is 7.8% Ethanol

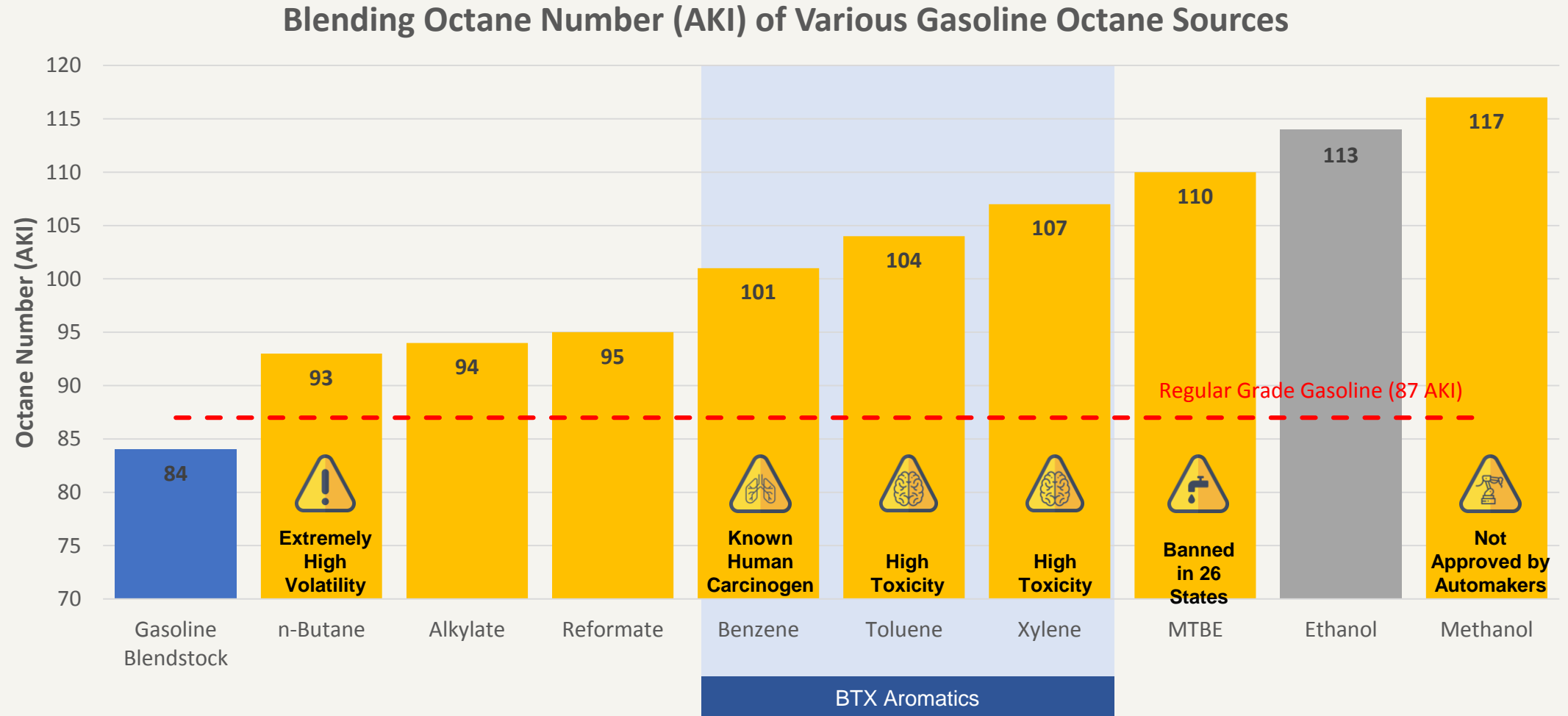
- ✓ U.S. and Brazil represent almost 50% of global gasoline demand
- ✓ The rest of the world blends at 3.2% rate
- ✓ Rest of world potential demand is 13bg



12-Month Export Period: 1.70 BILLION GALLONS



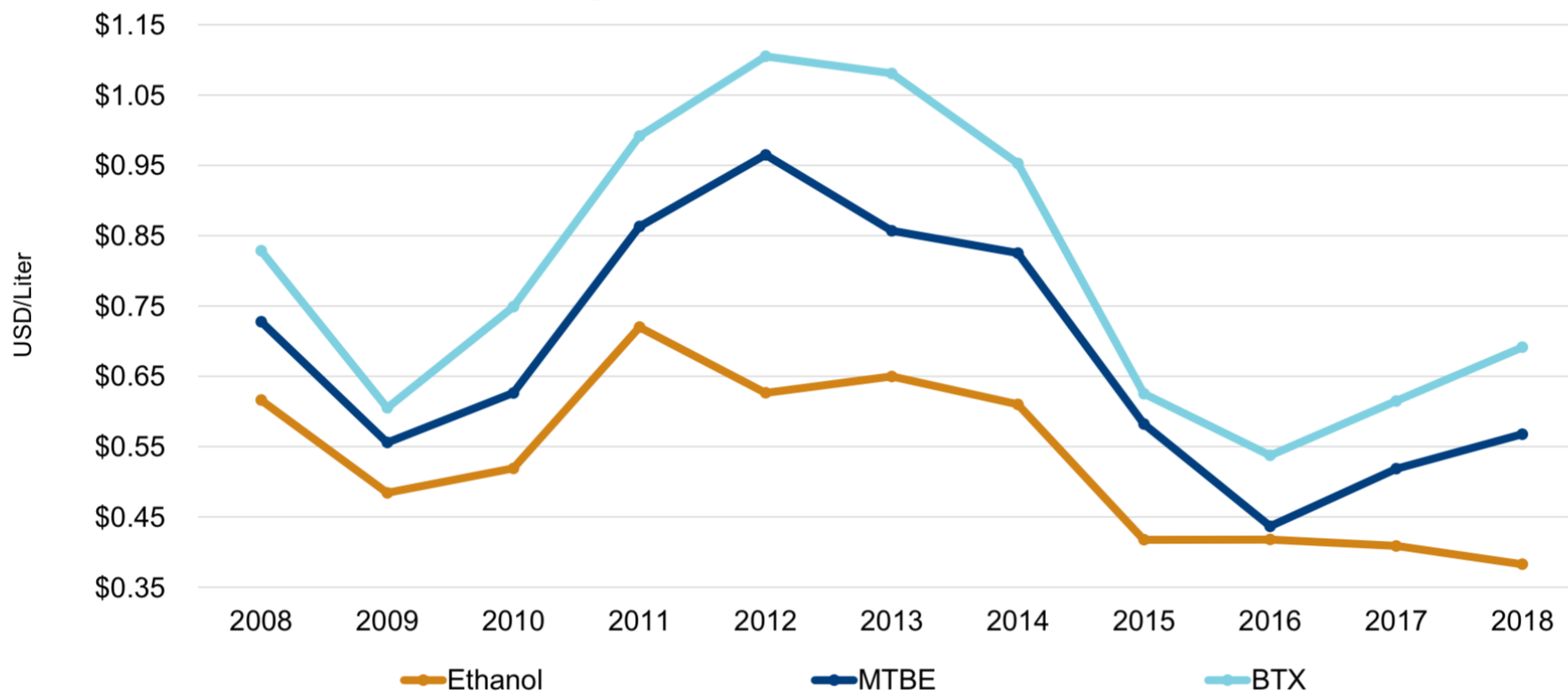
Ethanol's Octane Advantage



Ethanol Aromatics – Clean, Affordable

US corn ethanol is cheapest source of octane over the last decade ... and beyond!

Average Price Comparison – FOB Houston

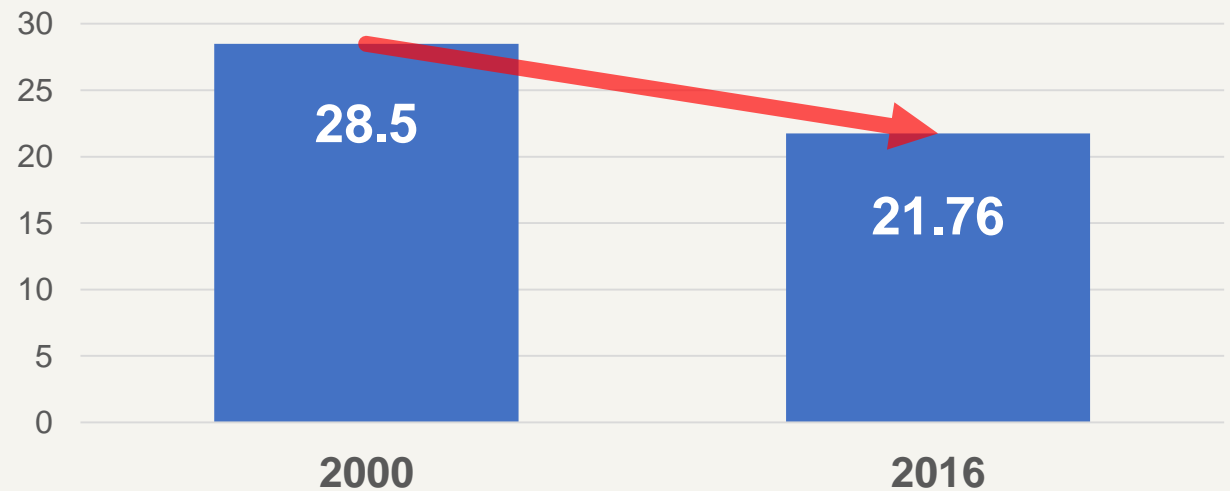




We can all breath easier

- Ethanol significantly reduces the aromatic content of gasoline
- Aromatics are carcinogens and smog-causing

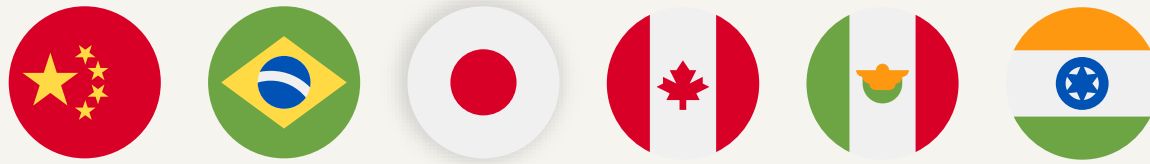
Percent Aromatics in U.S. Gasoline Pool



Source: EPA

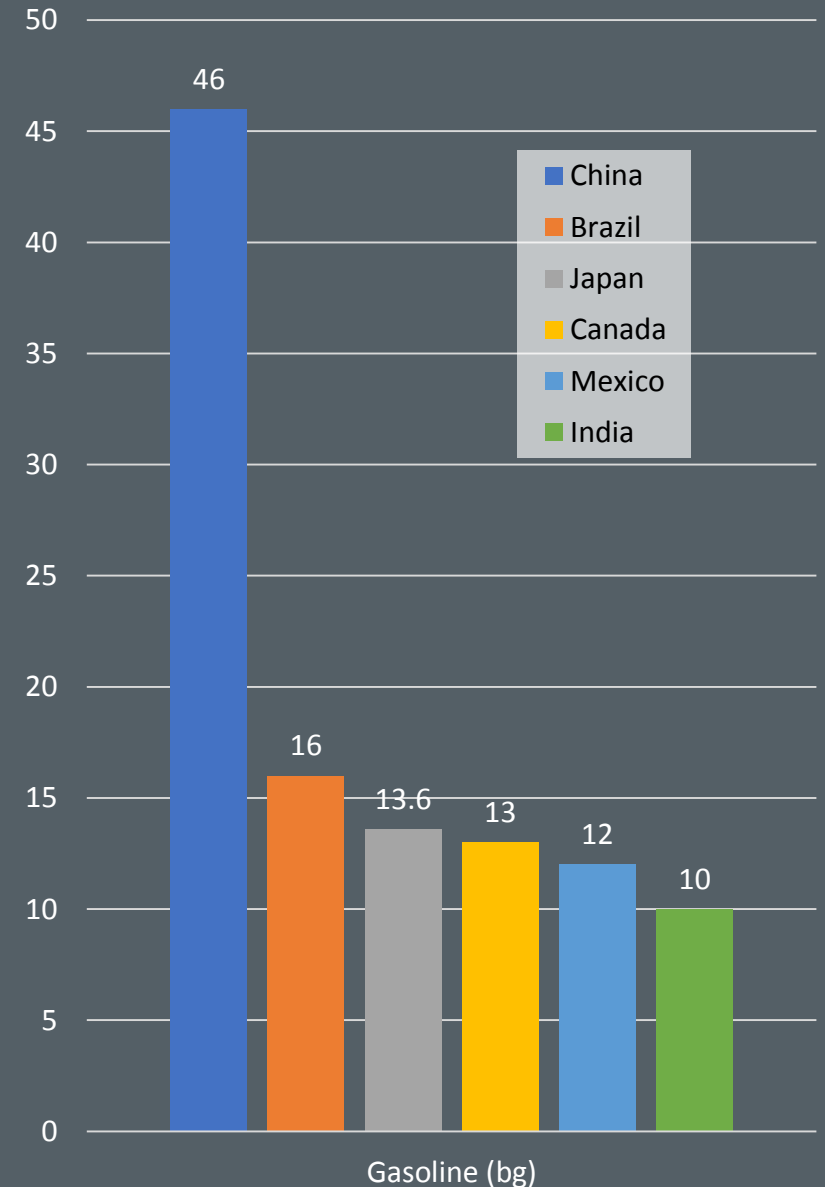


Where is our greatest opportunity?



Six of the largest fuel markets: China, Brazil, Japan, Canada, Mexico & India

- Annualized gasoline demand of 111bg
 - Combined potential of 14bg+ of new ethanol demand (4.9b bushels of corn)
 - These markets represent 32% of global gasoline sales



China Game changer?

E10 blend by 2020?

- NEA announced intention Sept '17
- 2nd largest gasoline market in world(45bg-50bg)
- E10 would represent 4bg of incremental ethanol demand
- Major Metro Areas are also ports – ripe for imports



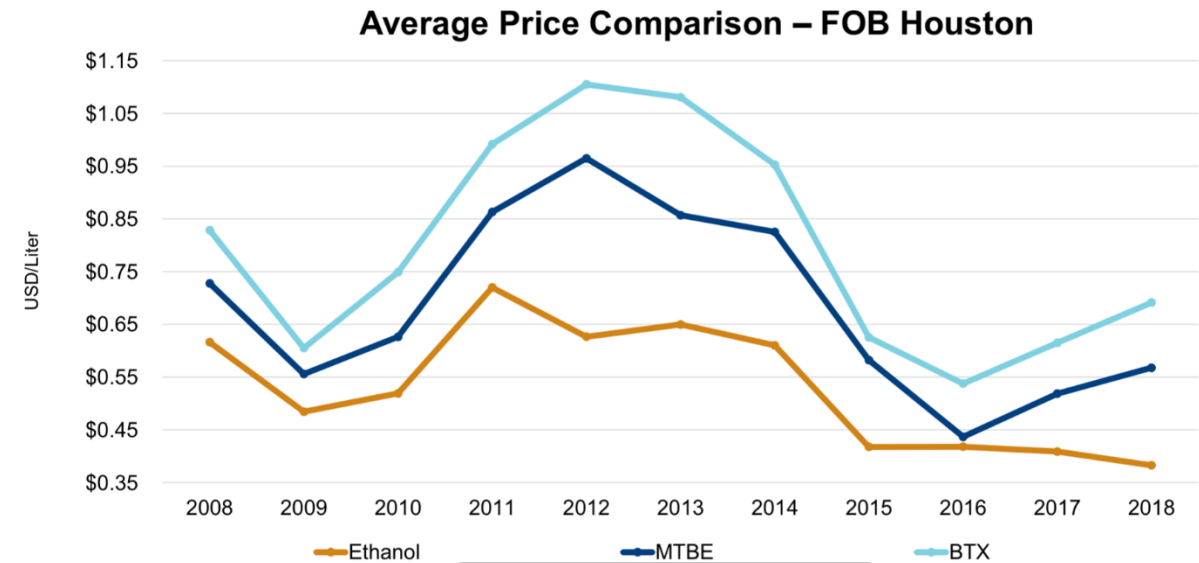
Mexico

The 1.2bg Opportunity



- Energy Reform began in 2014
- 12bg gasoline market that uses no material ethanol today
- E10 allowed countrywide except “Big 3” cities(816mg potential)
- MTBE is the predominate oxygenate of choice
- Great storyline – 2/3’s of MTBE is imported from the U.S.

U.S. corn ethanol is cheapest source of octane over the last decade ... and beyond



Trade Issues Around the Globe



CHINA

70%

25% Jan 1, 2017; 15% April 2 in response to U.S. 232 trade action; 25% July 6, 2018 in response to U.S. Section 301 trade action



BRAZIL

20%

TRQ at 600mln liters on a quarterly basis at 20% tariff above the allowance



INDIA

Fuel ethanol cannot be imported for blending



EU

9.6%

Result of 2011/12 Anti Subsidy Investigation. Currently has been extended and is under review by the Commission



INDONESIA

30%

No Imported Ethanol Allowed

